

## REMARKS

In the Official Action mailed on **10 May 2006**, the Examiner reviewed claims 1-20. Claims 1-3, 8-12, and 17-20 were rejected under 35 U.S.C. §102(b) as being anticipated by Manasse (USPN 5,345,578, hereinafter “Manasse”). Claims 4-7 and 13-16 were rejected under 35 U.S.C. §103(a) as being unpatentable over Manasse in view of Rand (USPub 2003/0126372, hereinafter “Rand”).

### Rejections under 35 U.S.C. §102(b) and 35 U.S.C. §103(a)

Independent claims 1, 10, 19, and 20 were rejected as being anticipated by Manasse. Dependent claims 4-7 and 13-16 were rejected as being unpatentable over Manasse in view of Rand. Applicant respectfully points out that Rand teaches a starvation circuit that will monitor the number of invalidations **for a transaction or leaf of a transaction**, in order to either flush the ordering queue and/or read bypass the queue (see paragraph [0045] of Rand). Thus, the counter disclosed by Rand **monitors on a per-transaction basis**.

In contrast, the present invention teaches monitoring the dynamic behavior by maintaining a count of the invalidations for each cache-line, and uses a threshold value of this count to make further decisions (see paragraphs [0030]-[0047] of the instant application). **The dynamic monitoring is, therefore, on a per-cache-line basis, and not on a per-transaction basis.** This is beneficial because it permits recognition of the particular dynamic behavior that occurs when a cache-line is being accessed frequently by **different processors**, causing contention on the bus.

Applicant respectfully submits that the combined system of Manasse and Rand will not be able to identify the ping-pong behavior of a single cache-line being accessed by many processors through the use of the starvation circuitry.

There is nothing within Manasse or Rand, either explicit or implicit, separately or in concert, which suggests monitoring the invalidations on a per-cache-line basis.

Accordingly, Applicant has amended independent claims 1, 10, 19, and 20 to clarify that the present invention teaches dynamic monitoring by maintaining the number of invalidations on a per-cache-line basis. These amendments find support in paragraphs [0030]-[0047] of the instant application. Dependent claims 4 and 13 have been canceled without prejudice. Dependent claims 5, 7, 14, and 16 have been amended to reflect these changes. No new matter has been added.

Hence, Applicant respectfully submits that independent claims 1, 10, 19, and 20 as presently amended are in condition for allowance. Applicant also submits that claims 2-3 and 5-9, which depend upon claim 1, and claims 11-12 and 14-18, which depend upon claim 10, are for the same reasons in condition for allowance and for reasons of the unique combinations recited in such claims.

**CONCLUSION**

It is submitted that the present application is presently in form for allowance. Such action is respectfully requested.

Respectfully submitted,

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